

Field Results

Date: *Sunday, September 15, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order:	19I0851
Client Project:	NPDES Parameters		
Client Sample ID:	001-Grab	Work Order/ID:	19I0851-02
Sample Description:	001	Sampled:	09/15/2019 00:00
Matrix:	Aqueous	Received:	09/15/2019 00:00

Analyses	Result	Units
FLD_CL_TITR	0.00	mg/L
pH	7.8	pH Units

Client Sample ID:	011-Grab	Work Order/ID:	19I0851-04
Sample Description:	011	Sampled:	09/15/2019 00:00
Matrix:	Aqueous	Received:	09/15/2019 00:00

Analyses	Result	Units
FLD_CL_TITR	0.00	mg/L
pH	7.8	pH Units



CASE NARRATIVE

Date: *Sunday, September 15, 2019*

Client: Arcelor Mittal USA, Inc.
Project: NPDES Parameters
Lab Order: 19I0851

The Total Suspended Solids method residue requirement of 2.5 mg were not met for the following sample(s).
Due to insufficient sample volume remaining, re-analysis was not performed on the sample(s).

<u>Laboratory ID</u>	<u>Sample Name</u>
19I0851-03	011-Composite



Analytical Results

Date: Sunday, September 15, 2019

Client: Arcelor Mittal USA, Inc.
Client Project: NPDES Parameters
Client Sample ID: 001-Composite **Work Order/ID:** 19I0851-01
Sample Description: 001 **Sampled:** 09/15/2019 0:00
Matrix: Aqueous **Received:** 09/15/2019 0:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed	
			Method: SM 4500-CN C/E-1999				Analyst: ABG			
										Prep Date/Time: 09/15/2019 11:55
Total Cyanide										
Cyanide, Total	ejj	A	0.0078	0.0020	0.0050		mg/L	1	09/15/2019 13:47	
			Method: SW-846 9014				Analyst: ABG			
										Prep Date/Time: 09/15/2019 12:30
Free Cyanide										
Free Cyanide		A	ND		0.0062		mg/L	1	09/15/2019 13:14	
			Method: EPA 350.1 Rev 2.0				Analyst: ABG			
										Prep Date/Time: 09/15/2019 12:05
Nitrogen, Ammonia as N										
Nitrogen, Ammonia (As N)	ei	A	0.35	0.054	0.10		mg/L	1	09/15/2019 13:14	
			Method: SM 2540 D-1997				Analyst: KMT			
										Prep Date/Time: 09/15/2019 10:08
Total Suspended Solids										
Total Suspended Solids	ejj	A	4.5	1.0	1.0		mg/L	1	09/15/2019 12:20	

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Analytical Results

Date: Sunday, September 15, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0851-03
Client Project:	NPDES Parameters	Sampled:	09/15/2019 0:00
Client Sample ID:	011-Composite	Received:	09/15/2019 0:00
Sample Description:	011		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 4500-CN C/E-1999			Analyst: ABG			
						Prep Date/Time: 09/15/2019 11:55			
Total Cyanide									
Cyanide, Total	ejj	A	0.0040	0.0020	0.0050		mg/L	1	09/15/2019 13:52
			Method: SW-846 9014			Analyst: ABG			
						Prep Date/Time: 09/15/2019 12:30			
Free Cyanide									
Free Cyanide		A	ND		0.0062		mg/L	1	09/15/2019 13:16
			Method: EPA 350.1 Rev 2.0			Analyst: ABG			
						Prep Date/Time: 09/15/2019 12:05			
Nitrogen, Ammonia as N									
Nitrogen, Ammonia (As N)	ei	A	0.27	0.054	0.10		mg/L	1	09/15/2019 13:22
			Method: SM 2540 D-1997			Analyst: KMT			
						Prep Date/Time: 09/15/2019 10:08			
Total Suspended Solids									
Total Suspended Solids	ejj	A	2.1	1.0	1.0		mg/L	1	09/15/2019 12:20

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Analytical Results

Date: Sunday, September 15, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0851-05
Client Project:	NPDES Parameters	Sampled:	09/15/2019 0:00
Client Sample ID:	002-Composite	Received:	09/15/2019 0:00
Sample Description:	002		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 4500-CN C/E-1999			Analyst: ABG			
			Prep Date/Time: 09/15/2019 11:55						
Total Cyanide									
Cyanide, Total	ejj	A	0.0024	0.0020	0.0050		mg/L	1	09/15/2019 13:54

ANALYTE TYPES: (AT)

A, B = Target Analyte

I = Internal Standard

M = Summation Analyte

S = Surrogate

T = Tentatively Identified Compound (TIC, concentration estimated)



QC SAMPLE IDENTIFICATIONS

BLK = Method Blank

DUP = Method Duplicate

BS = Method Blank Spike

MS = Matrix Spike

ICB = Initial Calibration Blank

CCB = Continuing Calibration Blank

CRL = Client Required Reporting Limit

PDS = Post Digestion Spike

QCS = Quality Control Standard

ICSA = Interference Check Standard "A"

ICSAB = Interference Check Standard "AB"

BSD = Method Blank Spike Duplicate

MSD = Matrix Spike Duplicate

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

OPR = Ongoing Precision and Recovery Standard

SD = Serial Dilution

CERTIFICATIONS (Certs)

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

d Illinois EPA drinking water, wastewater and solid waste analysis (#200064)

i Kansas Dept Health & Env. NELAP (#E-10397)

j Kentucky Wastewater Laboratory Certification Program (#108202)

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)**MDL:** Minimum Detection Limit**RL:** Reporting Limit**RPD:** Relative Percent Difference**U:** The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

Cooler Receipt Log

Cooler ID: Default Cooler

Temp: °C
 MICROBAC®

Comments

No time

Cooler Inspection Checklist

Ice Present or not required?	Yes
Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes
Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes
Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes
Sample type identified on COC?	Yes
Correct type of Containers Received	Yes
Correct number of containers listed on COC?	No
Containers Intact?	Yes
COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes
Sample labels match COC (Name, Date & Time?)	No
Samples arrived within hold time?	Yes
Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes
Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes

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